Remarks/Arguments

A. Claims in the Case

Claims 1-7, 9-11, 13-19, 21-30, 32-34, 36-42, 44-57, 59-61, 63-69, 71-73, and 147-152 are pending. Claim 1, 24, and 51 have been amended.

B. The Claims Are Not Obvious Over Kurz in view of Jung Under 35 U.S.C. §103(a)

The Examiner rejected claims 1-7, 9-11, 13-19, 21-30, 32-34, 36-42, 44-57, 59-61, 63-69, 71-73 and 147-152 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,386,571 to Kurz ("Kurz") in view of U.S. Patent Publication No. 2003/0014421 by Jung ("Jung"). Applicant respectfully disagrees with these rejections for at least the following reasons.

To reject a claim as obvious, the Examiner has the burden of establishing a *prima facie* case of obviousness. *In re Warner*, 154 U.S.P.Q. 173, 177-78 (C.C.P.A. 1967). To establish *prima facie* obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claims 1, 24, and 51

Applicant's claims are directed to a method that includes creating a model of a financial service organization (FSO) including a plurality of processing relationship software objects. Creating the model of the FSO includes preparing a processing relationship definition for at least two of selected processing relationship object representations. A highest processing relationship object represents the FSO. One or more lower level processing relationship object representations represent an FSO physical entity that is a bank branch office or a bank regional office. One or more other lower level processing relationship object representations a credit card

issuer or an acquirer of credit card payments. The processing relationship definition is stored. A credit card transaction associated with an FSO physical entity is processed using a processing relationship definition of the prepared processing relationship definition that includes a lower level relationship object representing the FSO physical entity.

Amended claims 1, 24, and 51 recite in part:

> creating a highest level processing relationship object in a processing relationship structure, wherein the highest level processing relationship object represents an FSO; and
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> creating a plurality of lower level processing relationship objects in the processing relationship structure, wherein the plurality of lower level processing relationship objects in the processing relationship structure are descendents of the highest level processing relationship object, wherein one or more of the lower level processing relationship objects represents an FSO physical entity that has a physical presence or manifestation, wherein the FSO physical entity is a bank branch office or a bank regional office, wherein one or more other of the lower level processing relationship objects represents a functional area, wherein the functional area is a credit card issuer or an acquirer of credit card payments;
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> ...
>
> processing a credit card transaction associated with an FSO physical entity using at least one processing relationship definition of the prepared processing relationship definitions, wherein the at least one processing relationship definition includes at least one lower level relationship object representing the FSO physical entity.

Support for the amendments to Applicant's claims can be found in Applicant's specification at least on page 21, line 27 to page 22, line 9; page 20, line 18 to page 21, line 2; page 11, lines 1-11; and page 13, lines 1-16. The combination of Kurz and Jung does not appear to teach or suggest at least the above-quoted features of claims 1, 24, and 51, in combination with the other

features of the claims.

With respect to claims 1, 24, and 25, the Examiner suggests that the previously claimed features are disclosed by the combination of Kurz and Jung. More specifically, the Examiner appears to rely on col. 6, lines 13-64, column 11, lines 9-20, and Fig. 2C of Kurz. Applicant respectfully disagrees with the Examiner's position.

The first cited portion of Kurz states:

> 1. The kernel entity set which in this case is "document" is the hierarchical top of the structure shown in FIG. 2C and is therefore positioned on top of the diagram, in this case in the upper left corner.
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> 2. The role entity sets are placed below this higher order kernel entity set "document" and are offset to the right by a predefined distance. In the case of the role entity sets "contract" and "description" the role entity sets are offset with respect to the kernel entity set whereas role entity sets which are subsets of other role entity sets are offset with respect to the role entity sets of which they are a subset. This is the case for the role entity sets "lease contract" and "sales contract" which are subsets of "contract". It is to be noted that the entity sets shown in FIG. 2C are arranged in an array of rows k and columns j. The kernel entity set "document" is placed in the upper left position k, j of this array. The role entity sets "contract" and "description" which are one hierarchical order below the kernel entity set "document" are placed in the next column j+1. The same applies analogously for the further role entity sets even one hierarchical order below the role entity sets "contract" and "description,. These are placed in the column j+2.
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> (Kurz, column 6, lines 27-53)

The second cited portion of Kurz states:

> It is to be noted that the entity relationship diagram of the invention may be transformed to an optimized database--such as a relational database. This transformation may be carried out by known methods. The resulting database may serve as a repository which is adapted to store instances of the entity sets of the diagram. Since the entity relationship diagram is

> redundancy free, the same applies as a consequence to the resulting data base. This also results in optimal access paths and a minimized access time to the instances stored in that database.
> (Kurz, column 11, lines 9-21)

Kurz thus discloses a kernel entity set having "document" at the hierarchical top of the structure. The role entity sets "contract" and "description" are placed below the higher order entity set "document". (Kurz, column 6, lines 14-65; FIG. 2C). Kurz also discloses that an entity relationship diagram can be transformed into an optimized database such as a relational database. (Kurz, column 11, lines 9-21). The Examiner acknowledges that Kurz does not expressly disclose a Financial Service Organization (FSO). The Examiner appears to rely on Jung to remedy the deficiencies in Kurz. The Examiner states:

> col .6 lines 13-64 and col. 11, lines 9-20 and fig. 2C- shows a financial service organization involving sales where each of the boxes is a relationship with the dotted lines representing different levels. The other types of entities (relationship objects) besides the business unit (business relationship objects) are optionally recited and thus carry no patentable weight. Kurz did not expressly disclose a FSO. Jung in fig.s's 34A and 34B shows relationship objects in a hierarchy in a business relationship (FSO).
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> (Office Action, page 3)

Figs. 34A and 34B of Jung discloses a hierarchical tree structure mapped to a hypergraph representation. The graph shows parent/child relationships between persons/offices within an organization (for example, between CEO and VP Sales). Jung does not appear to disclose an object representing a financial services organization (FSO). Further, Jung, alone or in combination with Kurz, does not appear to teach or suggest creating a highest level processing relationship object in a processing relationship structure, wherein the highest level processing relationship object represents an FSO; and creating a plurality of lower level processing relationship objects in the processing relationship structure, wherein the plurality of lower level processing relationship objects in the processing relationship structure are descendents of the

highest level processing relationship object, wherein one or more of the lower level processing relationship objects represents an FSO physical entity that has a physical presence or manifestation, wherein the FSO physical entity is a bank branch office or a bank regional office, wherein one or more other of the lower level processing relationship objects represents a functional area, wherein the functional area is a credit card issuer or an acquirer of credit card payments. Moreover, Jung, alone or in combination with Kurz, does not appear to teach or suggest processing a credit card transaction associated with an FSO physical entity using at least one processing relationship definition of the prepared processing relationship definitions, wherein the at least one processing relationship definition includes at least one lower level relationship object representing the FSO physical entity, as recited by amended claims 1, 24, and 51.

The Examiner states:

> A Financial Service Organization (FSO) taught by Jung does not change nor effect the normal functions of a hierarchical relationship of the objects and processing the objects as taught by Kurz. The Financial Organization (FSO) being created in a hierarchy with relationships would be performed the same way even with the addition of a branch bank office, a regional bank, a credit card issuer, or an acquirer.
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> Furthermore, "a branch bank office, a regional bank, a credit card issuer, or an acquirer are non-functional descriptive material and it would have been obvious to deploy in Kurz.
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> The type of information is given very little patentable weight because it is considered "non functional descriptive material that cannot render nonobvious an invention that would have otherwise been obvious". *In re Ngai*, 367 F.3d 1336, 1339, 70 USPQ 2d, 1862, 1864 (Fed. Cir. 2004). *In re Gulak*, 703 F.2d 1381, 1385, 217 USPQ401, 404 (Fed. Cir. 1983) (when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability). Statements of intended use do not serve to distinguish structure over the prior art. See *In re Pearson*, 494 F.2d 1399, 1403, 181 USPQ 641, 644 (CCPA 1974); *In re Yanush*, 4778 F.2d 958, 959, 152 USPQ 235, 238 (CCPA 1967).
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> (Office Action, page 10)

Applicant submits that the features of amended claims 1, 24, and 51 are not non-functional descriptive material. "Nonfunctional descriptive material", as stated in the M.P.E.P, "includes, but is not limited to music, literary works, and a compilation or mere arrangement of data." *See* M.P.E.P. § 2106.01. Applicant notes that amended claims 1, 24, and 51 recite processing a credit card transaction associated with an FSO physical entity using at least one processing relationship definition of the prepared processing relationship definitions, wherein the at least one processing relationship definition includes at least one lower level relationship object representing the FSO physical entity. The "bank branch office" or a "bank regional office" are FSO physical entities that are functionally related to the steps of processing a credit card transaction. For at least this reason, these elements are not non-functional descriptive material.

Applicant respectfully submits that the recited features of amended claims 1, 24 and 51 are not non-functional descriptive material and thus should be considered as having patentable weight sufficient to distinguish the claims over the cited art.

For at least these reasons, Applicant submits that claims 1, 24, and 51 are allowable over the cited art.

Applicant submits that many of claims dependent on claims 1, 24, and 51 are independently patentable. For example, amended claim 4 recites: "wherein the processing relationship value is configured for use in identifying an FSO business entity as an owner of the FSO transaction-related data, wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer".

The Examiner states:

> As per claims 4, 27, 54, 147, and 150, Kurz discloses, wherein the processing relationship value is configured for use in identifying an FSO business entity as an

> owner of the FSO transaction-related data, wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer. In Fig. 4E of Kurz shows a business entity as a company and a business unit (see col. 7, line 53 - col. 8, line 27) (emphasis added)

Applicant believes that the Examiner is basing the rejection of the claim 4 on the language of Applicant's claims before Applicant's amendment of March 26, 2007. In particular, claim 4 previously recited "wherein the FSO business entity is a company or a business unit or a bank branch office or a regional bank or a credit card line or issuer or an acquirer." (See Amendment; Response to Office Action Mailed October 24, 2006) (emphasis added). After the amendment of March 26, 2007, however, claim 1 recites: "wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer." (*emphasis added*). Kurz and Jung, singly or in combination, do not appear to teach or suggest wherein the processing relationship value is configured for use in identifying an FSO business entity as an owner of the financial service organization transaction-related data, wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer.

> Concerning claim 147 and 150, the Examiner states:
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> As per claims 4, 27, 54, 147, and 150, Kurz discloses, wherein the processing relationship value is configured for use in identifying an FSO business entity as an owner of the FSO transaction-related data, wherein the FSO business entity is a bank branch office or a regional bank or a credit card line or an issuer or an acquirer. In Fig. 4E of Kurz shows a business entity as a company and a business unit (see col. 7, line 53 - col. 8, line 27)

Applicant notes that claims 147 and 150 include different features than claim 4. For example, claim 147 recites: "wherein the plurality of lower level processing relationship objects comprises a credit card issuer object representing a credit card issuer and an acquirer object representing an acquirer, and wherein each of the credit card issuer object and the acquirer object has one or more descendent processing relationship objects." Claim 150 recites: "wherein at least one of the

one or more descendent processing relationship objects represents a bank branch." Neither Kurz nor the other cited art appears to teach or suggest these features in combination with the other features of claims.

Claim 11 recites: "wherein the displaying one or more processing relationship object representations on a display screen comprises displaying values associated with a sequence number for at least one of the plurality of lower level processing relationship objects and a level number for the at least one lower level processing relationship object, wherein the level number identifies a level in the processing relationship structure." The cited art does not appear to teach or suggest this feature in combination with the other features of claim 11.

The Examiner takes the position that Kurz, Fig. 5, discloses the above-quoted features of claim 11. Applicant respectfully disagrees. Regarding Fig. 5, Kurz states:

> In FIG. 5 a more complex example of an entity relationship diagram according to the invention is shown. The entity relationship diagram is displayed on a display 9 of a computer system. It comprises the kernel entity sets K_0, K_1 and K_2, the relation entity sets R_{00}, R_{01}, R_{02} and R_{12} as well as the attributive entity sets A_{00} and A_{01} and the role entity sets P_{00} and P_{01}. The kernel entity sets are displayed along a horizontal line 7 which is indicated by the dashed line. The horizontal line 7 partitions the display into a first and a second section. The first section is the relation section where the relation entity sets are displayed and the second section is the kernel section where the kernel entity sets, and optionally the attributive entity sets and the role entity sets are displayed. For simplicity the attributive entity sets and role entity sets of the kernel entity sets K_1 and K_2 of FIG. 5 are not shown in the diagram. In this example the symbols representing the different entity sets are arranged in an array of allowable positions on the display 9. This array of allowable positions is indicated by the grid of lines shown in FIG. 5. The point 8 defines the origin of a coordinate system x, y of this array.
> (Kurz, column 8, lines 4-27)

Fig. 5 of Kurz discloses an entity relationship diagram that makes reference to various kernel entity sets designated K_0, K_1 and K_2, relation entity sets designated R_{00}, R_{01}, R_{02} and R_{12}

attributive entity sets designated A_{00} and A_{01} and the role entity sets designated P_{00} and P_0. Kurz does not teach or suggest displaying one or more processing relationship object representations on a display screen comprises displaying values associated with a sequence number for at least one of the plurality of lower level processing relationship objects or a level number for the at least one lower level processing relationship object, wherein the level number identifies a level in the processing relationship structure.

> Regarding claim 151, the Examiner states:
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> As per claims 11, 34, 61, 148, 151, Kurz discloses, wherein the displaying one or more processing relationship object representations on a display screen comprises displaying values associated with a sequence number and a level number. (Fig. 5 – shows displayed values in a sequence number for the lower level processing objects and the name identifies level number in the processing relationship structure).

Claim 151 recites: "wherein displaying the at least two processing relationship object representations comprises displaying a row for each of at least two processing relationship objects, wherein each of the rows comprises an object identifier and a level number, wherein the descendants of each object appear directly below that object."

The Examiner takes the position that Kurz, Fig. 5, discloses the above-quoted features of claim 11. Applicant respectfully disagrees. As noted above with respect to claim 11, Fig. 5 of Kurz discloses an entity relationship diagram that makes reference to various kernel entity sets designated K_0, K_1 and K_2, relation entity sets designated R_{00}, R_{01}, R_{02} and R_{12} attributive entity sets designated A_{00} and A_{01} and the role entity sets designated P_{00} and P_0. Kurz does not teach or suggest "wherein displaying the at least two processing relationship object representations comprises displaying a row for each of at least two processing relationship objects, wherein each of the rows comprises an object identifier and a level number, wherein the descendants of each object appear directly below that object."

Regarding claim 151, the Examiner states:

> The type of information displayed is given very little patentable weight because it is considered "non functional descriptive material that cannot render nonobvious an invention that would have otherwise been obvious."...[citations omitted]. (when descriptive materials is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability.) Statements of intended use do not serve to distinguish structure over the prior art.

The Examiner appears to take the position that the features claim 151 are "non functional descriptive material." Applicant respectfully disagrees. Claim 151 recites displaying a row for each of at least two processing relationship objects, wherein each of the rows comprises an object identifier and a level number, wherein the descendants of each object appear directly below that object. The display of the object identifier and a level number, and the display of the descendants of each object below the object, are not non-functional, but are expressly functional in that they provide specific functional information pertaining to the object (namely the object identifier and the level number) in a particular arrangement for assisting the user in processing the transactions. Moreover, none of the information recited in claim 151 is merely an "intended use." For at least these reasons, Applicant submits that claim 151 is allowable over the cited art.

C. Additional Remarks

Based on the above, Applicant submits that the claims are now in condition for allowance. Favorable reconsideration is respectfully solicited.

If any extension of time is required, Applicant hereby requests the appropriate extension of time. If any fees are omitted or if any fees are required or have been overpaid, please appropriately charge or credit those fees to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5053-30801/EBM.

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